What is claimed is:

1. An apparatus for capturing an image, comprising:

a scene-referred raw data generating section to generate scene-referred raw data, which directly represent said image while depending on image-capturing characteristics of said apparatus;

a reproduction-auxiliary data generating section to generate reproduction-auxiliary data, based on which an image-capturing characteristic compensation processing is to be applied to said scene-referred raw data generated by said scene-referred raw data generating section, so as to generate scene-referred image data in a standardized format from said scene-referred raw data;

a designating section to designate a degree of white-balance adjustment; and

a storage controlling section to attach said reproduction-auxiliary data and white-balance data indicating said degree of said white-balance adjustment to said scene-referred raw data in order to store all of them into a storage medium.

2. The apparatus of claim 1, further comprising:

an image-capturing data generating section to generate image-capturing data, which represent image-capturing conditions established at a time of capturing said image;

wherein said storage controlling section attaches said reproduction-auxiliary data, said white-balance data and said image-capturing data to said scene-referred raw data in order to store all of them into said storage medium.

3. The apparatus of claim 1,

wherein said image-capturing data includes a photographing EV value established at a time of capturing said image.

4. An apparatus for processing data, comprising:

a receiving section to receive scene-referred raw data, which directly represent an image captured by an image-capturing apparatus while depending on image-capturing characteristics of said image-capturing apparatus, and to receive reproduction-auxiliary data in respect to said scene-referred raw data, and to receive white-balance data indicating a degree of white-balance adjustment;

a scene-referred image data generating section to generate scene-referred image data from said scene-referred

raw data received by said receiving section, based on said

reproduction-auxiliary data received by said receiving

section, by applying an image-capturing characteristic

compensation processing to said scene-referred raw data; and

an output data generating section to generate output

data by attaching said white-balance data to said scene-

referred image data.

5. The apparatus of claim 4,

wherein said scene-referred image data are generated in

a standardized format from said scene-referred raw data.

6. The apparatus of claim 4,

wherein said receiving section also receives image-

capturing data, which represent image-capturing conditions

established at a time of capturing said image; and

wherein said output data generating section generates

said output data by attaching said white-balance data and

said image-capturing data to said scene-referred image data.

7. The apparatus of claim 5, further comprising:

an output-referred image data generating section to

generate output-referred image data, based on which a

reproduced image is formed on an outputting medium, by

applying an image-processing for optimizing said reproduced

image to said scene-referred image data generated by said

scene-referred image data generating section;

wherein contents of said image-processing are

determined on the basis of said white-balance data received

by said receiving section.

8. The apparatus of claim 6, further comprising:

an output-referred image data generating section to

generate output-referred image data, based on which a

reproduced image is formed on an outputting medium, by

applying an image-processing for optimizing said reproduced

image to said scene-referred image data generated by said

scene-referred image data generating section;

wherein contents of said image-processing are

determined on the basis of said white-balance data and said

image-capturing data, both received by said receiving

section.

9. The apparatus of claim 4,

wherein said receiving section receives a photographing

EV value established at a time of capturing said image.

10. The apparatus of claim 7, further comprising:

an applying amount determining section to determine an applying amount of said white-balance adjustment to be applied to said scene-referred image data, based on said white-balance data indicating said degree of said white-balance adjustment;

wherein said output-referred image data generating section includes:

a white-balance adjusting section to apply said applying amount of said white-balance adjustment, determined by said applying amount determining section, to said scene-referred image data.

11. The apparatus of claim 10,

wherein said white-balance adjusting section is provided with an image area dividing function for dividing a whole image area of said scene-referred image data into a plurality of small image areas.

12. The apparatus of claim 11,

wherein said white-balance adjusting section is further provided with a ratio calculating function for calculating a

R/G ratio and a B/G ratio for a respective one of said

plurality of small image areas, divided by said image area

dividing function; and

wherein said R/G ratio represents a ratio between an

integrated value of R (Red) signals and another integrated

value of G (Green) signals within each of said plurality of

small image areas, while said B/G ratio represents a ratio

between an integrated value of B (Blue) signals and another

integrated value of G (Green) signals within each of said

plurality of small image areas.

13. The apparatus of claim 12,

wherein said white-balance adjusting section is further

provided with a light-source estimating function for

estimating a kind of a photographic light source for a

respective one of said plurality of small image areas, by

plotting said R/G ratio and said B/G ratio, calculated by

said ratio calculating function, onto a light-source

estimating map in which light-source area frames, indicating

ranges of various combinations of said R/G ratio and said B/G

ratio corresponding to various kinds of light-sources.

14. The apparatus of claim 13,

wherein said white-balance adjusting section is further provided with a light-source determining function for determining a kind of a photographic light source under which said scene-referred image data are acquired by employing a number of small image areas plotted within one of said light-source area frames, or a membership function in which a photographic EV value is a variable.

15. The apparatus of claim 11,

wherein said white-balance adjusting section is further provided with a color-temperature estimating function for estimating a color temperature of a photographic light source for a respective one of said plurality of small image areas by employing a least squares method.

16. The apparatus of claim 15,

wherein said white-balance adjusting section is further provided with a histogram creating function for creating a histogram based on an emerging frequency of said color temperature of said photographic light source for a respective one of said plurality of small image areas.

17. The apparatus of claim 16,

wherein said white-balance adjusting section is further
provided with a group-wise white-balance adjusting function
for dividing said whole image area of said scene-referred
image data into plural groups, based on said histogram
created by said histogram creating function, so as to apply a
different white-balance adjustment to a respective one of
said plural groups, said different white-balance adjustment
is one of various white-balance adjustments being different
relative to each other corresponding to a respective one of
said plural groups.

18. The apparatus of claim 10,

wherein said applying amount determining section can
arbitrarily establish a relationship between said white-
balance data, indicating said degree of said white-balance
adjustment, and an applying amount of said white-balance
adjustment to be applied in practice.

19. An apparatus for outputting a reproduced image onto an
outputting medium, comprising:

a receiving section to receive scene-referred raw data,
which directly represent an image captured by an image-
capturing apparatus while depending on image-capturing

characteristics of said image-capturing apparatus, and to

receive reproduction-auxiliary data in respect to said scene-

referred raw data, and to receive white-balance data

indicating a degree of white-balance adjustment;

a scene-referred image data generating section to

generate scene-referred image data from said scene-referred

raw data received by said receiving section, based on said

reproduction-auxiliary data received by said receiving

section, by applying an image-capturing characteristic

compensation processing to said scene-referred raw data;

an output-referred image data generating section to

generate output-referred image data, based on which a

reproduced image is formed on an outputting medium, by

applying an image-processing for optimizing an image quality

of said reproduced image to said scene-referred image data

generated by said scene-referred image data generating

section; and

an image-forming section to form said reproduced image

on said outputting medium, based on said output-referred

image data;

wherein contents of said image-processing for

optimizing said image quality of said reproduced image are

determined on the basis of said white-balance data indicating said degree of white-balance adjustment.

20. The apparatus of claim 19,

wherein said scene-referred image data are generated in a standardized format from said scene-referred raw data.

21. The apparatus of claim 19,

wherein said receiving section also receives image-capturing data, which represent image-capturing conditions established at a time of capturing said image.

22. The apparatus of claim 19,

wherein said receiving section receives a photographing EV value established at a time of capturing said image.

23. The apparatus of claim 19, further comprising:

an applying amount determining section to determine an applying amount of said white-balance adjustment to be applied to said scene-referred image data, based on said white-balance data indicating said degree of said white-balance adjustment;

wherein said output-referred image data generating
section includes:

a white-balance adjusting section to apply said
applying amount of said white-balance adjustment, determined
by said applying amount determining section, to said scene-
referred image data.

24. The apparatus of claim 23,

wherein said white-balance adjusting section is
provided with an image area dividing function for dividing a
whole image area of said scene-referred image data into a
plurality of small image areas.

25. The apparatus of claim 24,

wherein said white-balance adjusting section is further
provided with a ratio calculating function for calculating a
R/G ratio and a B/G ratio for a respective one of said
plurality of small image areas, divided by said image area
dividing function; and

wherein said R/G ratio represents a ratio between an
integrated value of R (Red) signals and another integrated
value of G (Green) signals within each of said plurality of
small image areas, while said B/G ratio represents a ratio

between an integrated value of B (Blue) signals and another

integrated value of G (Green) signals within each of said

plurality of small image areas.

26. The apparatus of claim 25,

wherein said white-balance adjusting section is further

provided with a light-source estimating function for

estimating a kind of a photographic light source for a

respective one of said plurality of small image areas, by

plotting said R/G ratio and said B/G ratio, calculated by

said ratio calculating function, onto a light-source

estimating map in which light-source area frames, indicating

ranges of various combinations of said R/G ratio and said B/G

ratio corresponding to various kinds of light-sources.

27. The apparatus of claim 26,

wherein said white-balance adjusting section is further

provided with a light-source determining function for

determining a kind of a photographic light source under which

said scene-referred image data are acquired by employing a

number of small image areas plotted within one of said light-

source area frames, or a membership function in which a

photographic EV value is a variable.

28. The apparatus of claim 24,

     wherein said white-balance adjusting section is further

provided with a color-temperature estimating function for

estimating a color temperature of a photographic light source

for a respective one of said plurality of small image areas

by employing a least squares method.

29. The apparatus of claim 28,

     wherein said white-balance adjusting section is further

provided with a histogram creating function for creating a

histogram based on an emerging frequency of said color

temperature of said photographic light source for a

respective one of said plurality of small image areas.

30. The apparatus of claim 29,

     wherein said white-balance adjusting section is further

provided with a group-wise white-balance adjusting function

for dividing said whole image area of said scene-referred

image data into plural groups, based on said histogram

created by said histogram creating function, so as to apply a

different white-balance adjustment to a respective one of

said plural groups, said different white-balance adjustment

is one of various white-balance adjustments being different

relative to each other corresponding to a respective one of

said plural groups.

31. The apparatus of claim 23,

        wherein said applying amount determining section can

arbitrarily establish a relationship between said white-

balance data, indicating said degree of said white-balance

adjustment, and an applying amount of said white-balance

adjustment to be applied in practice.

32. A method for processing data, comprising the steps of:

        applying an image-capturing characteristic compensation

processing to scene-referred raw data, which directly

represent an image captured by an image-capturing apparatus

while depending on image-capturing characteristics of said

image-capturing apparatus, based on reproduction-auxiliary

data in respect to said scene-referred raw data, in order to

generate scene-referred image data from said scene-referred

raw data; and

        generating output-referred image data, based on which a

reproduced image is formed on an outputting medium, by

applying an image-processing for optimizing an image quality

of said reproduced image to said scene-referred image data

generated in said applying step;

wherein contents of said image-processing for

optimizing said image quality of said reproduced image are

determined on the basis of white-balance data indicating a

degree of white-balance adjustment.

33. The method of claim 32,

wherein said scene-referred image data are generated in

a standardized format from said scene-referred raw data.

34. The method of claim 32,

wherein said contents of said image-processing for

optimizing said image quality of said reproduced image are

determined on the basis of said white-balance data indicating

said degree of white-balance adjustment and image-capturing

data representing image-capturing conditions established at a

time of capturing said image.

35. The method of claim 32, further comprising the steps of:

determining an applying amount of said white-balance

adjustment to be applied to said scene-referred image data,

based on said white-balance data indicating said degree of said white-balance adjustment; and

applying said applying amount of said white-balance adjustment, determined in said determining step, to said scene-referred image data.

36. The method of claim 35, further comprising the step of:

dividing a whole image area of said scene-referred image data into a plurality of small image areas.

37. The method of claim 36, further comprising the step of:

calculating a R/G ratio and a B/G ratio for a respective one of said plurality of small image areas, divided in said dividing step;

wherein said R/G ratio represents a ratio between an integrated value of R (Red) signals and another integrated value of G (Green) signals within each of said plurality of small image areas, while said B/G ratio represents a ratio between an integrated value of B (Blue) signals and another integrated value of G (Green) signals within each of said plurality of small image areas.

38. The method of claim 37, further comprising the step of:

estimating a kind of a photographic light source for a respective one of said plurality of small image areas, by plotting said R/G ratio and said B/G ratio, calculated in said calculating step, onto a light-source estimating map in which light-source area frames, indicating ranges of various combinations of said R/G ratio and said B/G ratio corresponding to various kinds of light-sources.

39. The method of claim 38, further comprising the step of:

determining a kind of a photographic light source under which said scene-referred image data are acquired by employing a number of small image areas plotted within one of said light-source area frames, or a membership function in which a photographic EV value is a variable.

40. The method of claim 36, further comprising the step of:

estimating a color temperature of a photographic light source for a respective one of said plurality of small image areas by employing a least squares method.

41. The method of claim 40, further comprising the step of:

creating a histogram based on an emerging frequency of said color temperature of said photographic light source for a respective one of said plurality of small image areas.

42. The method of claim 41, further comprising the step of:

dividing said whole image area of said scene-referred image data into plural groups, based on said histogram created in said creating step, so as to apply a different white-balance adjustment to a respective one of said plural groups, said different white-balance adjustment is one of various white-balance adjustments being different relative to each other corresponding to a respective one of said plural groups.

43. The method of claim 35,

wherein a relationship between said white-balance data indicating said degree of said white-balance adjustment and an applying amount of said white-balance adjustment to be applied in practice can be arbitrarily established in said determining step for determining said applying amount of said white-balance adjustment.

44. The method of claim 32, further comprising the step of:

receiving a photographing EV value established at a time of capturing said image.

45. A computer program for executing data processing operations, comprising the functional steps of:

applying an image-capturing characteristic compensation processing to scene-referred raw data, which directly represent an image captured by an image-capturing apparatus while depending on image-capturing characteristics of said image-capturing apparatus, based on reproduction-auxiliary data in respect to said scene-referred raw data, in order to generate scene-referred image data from said scene-referred raw data; and

generating output-referred image data, based on which a reproduced image is formed on an outputting medium, by applying an image-processing for optimizing an image quality of said reproduced image to said scene-referred image data generated in said applying step;

wherein contents of said image-processing for optimizing said image quality of said reproduced image are determined on the basis of white-balance data indicating a degree of white-balance adjustment.

46. A recording medium that stores a computer program for executing data processing operations,

wherein said computer program comprises the functional steps of:

applying an image-capturing characteristic compensation processing to scene-referred raw data, which directly represent an image captured by an image-capturing apparatus while depending on image-capturing characteristics of said image-capturing apparatus, based on reproduction-auxiliary data in respect to said scene-referred raw data, in order to generate scene-referred image data from said scene-referred raw data; and

generating output-referred image data, based on which a reproduced image is formed on an outputting medium, by applying an image-processing for optimizing an image quality of said reproduced image to said scene-referred image data generated in said applying step; and

wherein contents of said image-processing for optimizing said image quality of said reproduced image are determined on the basis of white-balance data indicating a degree of white-balance adjustment.